

JAN 25 1929

# THE WILSON BULLETIN

A QUARTERLY MAGAZINE OF ORNITHOLOGY  
Published by the Wilson Ornithological Club

---

Vol. XL (Old Series) No. 4

December, 1928

---

Vol. XXXV (New Series) Whole Number 145

---

## NOTES ON THE NESTING HABITS AND SONGS OF THE MOCKINGBIRD\*

BY J. PAUL VISSCHER

Although the Mockingbird is but rarely seen as far north as Cleveland, it is nevertheless a common resident of large areas of North America, ranging from Mexico northward to the zone in which we are, which is perhaps, its most northern limit.

It is an exclusively American bird and is closely related to the Catbird and Brown Thrasher and more distantly to the wrens, all of which are noted for their singing ability. But of them all it is generally agreed that the Mockingbird stands supreme in some respects, at least, as America's most remarkable song bird, and it seems doubtful to such men as Chapman and Shufeldt if even the Nightingale of Europe can equal the remarkable vocal powers which have made the Mockingbird famous throughout the world.

Although the scientific name, *Mimus polyglottos*, and the common name, Mockingbird, clearly indicate the habit of mimicking the notes of other birds, yet there are but few actual records of the notes and songs which it imitates.<sup>1</sup>

On Piver's Island in the harbor of Beaufort, North Carolina, there are each year some ten or a dozen pairs of these birds nesting in the luxuriant growths of *Yucca* which adorn the grounds of the U. S. Biological Station located there. Here during the months of June and July for three successive summers, and on other occasional visits of a few days at a time, the writer has had the opportunity to study the nesting habits and songs of these most interesting birds.

The birds appear to be permanent residents of this locality; at least Mockingbirds are to be found there at all seasons of the year. They are more numerous, however, during the spring and summer months.

---

\*Presented at the joint meeting of the Wilson Ornithological Club and the Inland Bird Banding Association at Cleveland, Ohio, on November 26, 1927.

<sup>1</sup>Whittle, C. L. "The Arboretum Mockingbird." *Auk*, vol. 39, 1922, pp. 496-506.

Nesting begins in late March or early April, and a second brood is often well advanced by the middle of June. A third brood appears to be common but not universal.

Of the ten nests observed during one season, nine were placed in forks or in the dense foliage of the large *Yuccas* which grow to a height of more than twelve feet, with their sword-like leaves bristling for several feet in all directions. These growths afford admirable protection against most enemies, and even man frequently has difficulty in observing these nests.

The nests are made and completed during the course of about three days' endeavor on the part of both birds. The nests were begun by forming a loose structure of twigs as a sort of platform, on and in which a fairly substantial nest was made of sea weeds and grasses, mostly the common eel-grass which is found abundantly in windrows along the beaches of the island. This was lined by finer grasses, by pieces of cloth and even feathers.

The eggs are relatively large, about an inch in length and are heavily blotched with rufous brown on a pale bluish-green background. There were four eggs in each completed nest examined by the writer; but Chapman states that five and six are occasionally laid.

Incubation begins with the laying of the first egg, so that the young are not all hatched simultaneously. This difference is clearly noted throughout the brooding period when the nestlings are of noticeably diverse sizes, and this often results in the death of one or more of the brood. Although the nests are well built and advantageously located with reference to their enemies, they are frequently destroyed by the elements, often being exposed to the powerful rays of the sun and to the rather frequent torrential rains which often cause great havoc to the nests and nestlings. Several nests were found completely in ruins after such storms, and others were found in which the young were apparently drowned within the nest. Since heavy showers and storms of this sort occur with increasing frequency and strength during the course of the summer months it is evident that such disasters would occur more frequently with the second and third broods than with the first.

Piver's Island contains several acres of land but little more than one is exposed at flood tide. On this higher portion some thirty *Yuccas* are found. These are apparently allotted rather definitely between the Mockingbirds of the Island, as no two nests were found within twenty-five feet of each other, and during the nesting period each male appeared to guard his territory very effectively against encroachment, not to mention encroachment.

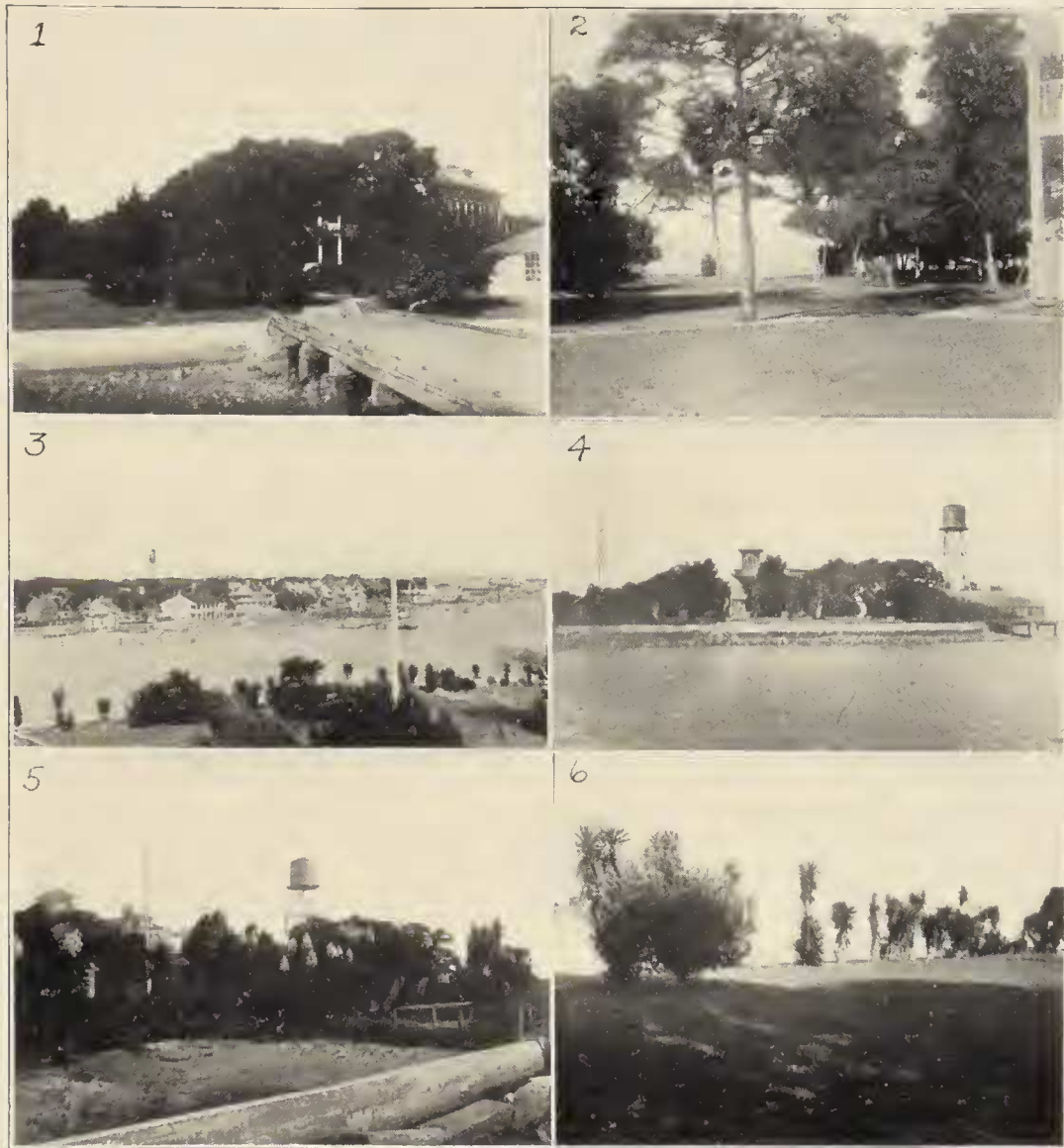


FIGURE 1. 1, Approach to the Laboratory Building of the U. S. Biological Station at Beaufort, N. C., with a portion of the pier in the foreground. 2, Scene on the island looking toward the "Banks," or sand dunes, which lie to the southward. 3, Waterfront of the town of Beaufort as seen from the island. 4, Piver's Island, with the U. S. Biological Station as seen from the mainland. 5, The waterfront of Piver's Island, showing the row of beautiful yuccas. 6, A view of some of the yuccas on Piver's Island: a Mockingbird is sitting on its favorite song perch in the top of the nearest yucca tree, but is invisible in the reduced photograph.

It is indeed an interesting and remarkable spectacle to observe two cocks in combat. Although these occur with some frequency during the course of a season, one pair in particular seemed always in trouble, and the fighting occurred in a very restricted area (less than ten yards in diameter) apparently midway between their nests. These two were observed on several occasions to utter peculiar notes and then to alight on the open ground some ten feet apart and to run toward each other with great speed, while constantly uttering harsh and rasping calls. Upon approaching each other they would literally jump perpendicularly into the air and attempt to peck the opponent on the top of the head. To observe such birds rising time and again by powerful jumps to heights of three to four feet, meanwhile calling loudly—perhaps vilifying each other or calling to their mates to watch—was indeed a novel spectacle. These fights frequently persisted for fully five or more minutes, but on no occasion was there a fatality.

It is also at the mating season that these birds display their remarkable vocal achievements. Each male apparently has a favorite nest perch from which he can guard his territory and from which he pours forth his songs in marvelous variety. Not all of the birds are equally expert as musical artists but the powers of one bird in particular attracted attention. The favorite perch for this bird was high up on the edge of the platform of the water-tower on the island. This bird would frequently sing from this perch for more than thirty minutes with little or no intermission. Not only did this bird sing in the daytime but on clear moonlight nights would pour forth his songs at most all hours—apparently determined by the fullness of the moon on that particular night. It was heard in early evening, late evening, at midnight, and during the very early morning hours as well as during the regular morning hours when many Mockingbirds would seem to join in chorus.

Taking advantage of this opportunity the author made, with the aid of a colleague at the laboratory, Dr. Hoyt Hopkins (formerly of Oberlin College), a list of the more characteristic songs and calls which were heard, uttered in most cases by the single male referred to above.

Robin (very often)  
Bluebird (frequently)  
Tufted Titmouse (very often)  
Crested Flycatcher (occasionally)  
Towhee (occasionally)  
Killdeer (occasionally)  
Cat-bird (frequently)  
Brown Thrasher (frequently)

Maryland Yellowthroat (frequently)  
 Yellow Legs (rarely)  
 Oriole (Baltimore) (frequently)  
 Rail (Clapper) (rarely)  
 House Wren (occasionally)  
 Carolina Wren (frequently)  
 Yellow-breasted Chat (frequently)  
 \*Grackle (Boat-tailed?) (rarely)  
 \*Nuthatch (occasionally)  
 Cardinal (very often)  
 Oven-bird (very often)  
 Chickadee (frequently)  
 Quail (rarely)  
 Pewee (occasionally)  
 Scarlet Tanager (frequently)  
 Phoebe (occasionally)  
 Whip-poor-will (rarely)  
 Goldfinch (rarely)  
 \*Green Heron (once)  
 Cedar Waxwing (once)  
 \*English Sparrow (occasionally)  
 Song Sparrow (frequently)  
 \*Purple Martin (once)  
 Kingbird (rarely)  
 \*Night Hawk (rarely)  
 Flicker (frequently)  
 Crow (rarely)

Although this list comprises thirty-five birds it was apparent to both Dr. Hopkins and myself that many more were mimicked whose songs we were unable to identify at the time.

Mr. Charles W. Townsend in his article on Mimicry of Voice in Birds<sup>2</sup> states that the Mockingbird is the most proficient mimic among our native birds and notes that a single mocker at the Arnold Arboretum has been heard to mimic fifty-five different birds. He says in reference to this bird, which was also studied with care by H. W. Wright<sup>3</sup>, and C. L. Whittle<sup>4</sup> as well, "the alarm and call notes of the Robin were as perfect as was the cheerful, glorious song of the familiar bird. The multiple calls of the Flicker were evidently favorites of his and were introduced at frequent intervals. The melody of the Song Sparrow was as unmistakable but not perfect. The rattling of the Crow and of the Kingfisher, the whistle of the Bobwhite, the call of the

\*Common on island.

<sup>2</sup>Townsend, Charles W. "Mimicry of Voice in Birds." *Auk*, vol. 41, 1924, pp. 541-542.

<sup>3</sup>Wright, Horace W. "The Mockingbird in the Boston Region, and in New England and Canada." *Auk*, vol. 38, 1922, pp. 382-432.

<sup>4</sup>Whittle, C. L. "The Arboretum Mockingbird." *Auk*, vol. 39, 1922, pp. 496-506.

Barn Swallow and the songs of the Baltimore Oriole, the Bluebird, the Scarlet Tanager and the Chewink, all in turn delighted my ears." He then asks, "could any one doubt that his imitations were conscious ones and that he took pleasure in them?" Townsend also relates an instance reported by Dr. S. C. Brooks of an apparent example of conscious mimicry in the Mockingbird. The bird was imitating the calls of the Killdeer, when a Sparrow Hawk flew by, and the mimic at once set up the rolling call of this hawk apparently throwing the hawk completely off his guard.

The author has wondered if this is a proven case of mimicry or if, as in so many birds, it is only an example of the ability to sing more than a single tune. Of the thirty-five birds listed above, those birds which were co-residents on the island were mimicked with much less frequency than others which were never seen by the author during his sojourns there, although it must be admitted that in almost every case they are listed by Pearson in his "Birds of North Carolina" as migrants through this territory. It is also significant that the songs most frequently mimicked by these birds at Beaufort, N. C., are the same ones which are the favorites of Mockingbirds from widely separated territories as at Cambridge, Massachusetts, at St. Louis, Missouri, and even of those in California.

Townsend admits that the close relatives of the Mockingbirds, the thrashers and the wrens, have many inventive songs, although most of them have series of couplets which are characteristic of the songs of other birds. He would agree that all real songsters mimic to a certain extent, but that the better ones are inventive as well; that is, they have the ability to add short musical phrases to the songs inherited or heard, and that thus new songs are produced. As typical examples of this he would list the Brown Thrasher and the Hermit Thrush while he believes that the English Starling and the Mockingbird are only mimics.

Opposed to the idea of Townsend, however, are the observations of Mr. Donald R. Dickey<sup>5</sup> in which he cites examples of mimicry in a Western Mockingbird in a bird which had just completed its juvenile molt. He believes that "the very few months which had actually elapsed since his youngster first saw light would seem to form all too short a period for the purely imitative acquisition of so varied a repertoire." and suggests that the basic phrases of the Mockingbird's vocabulary which simulate the notes of other birds may be an intrinsic part of his inherited vocal ability.

---

<sup>5</sup>Dickey, Donald R. "The Mimetic Aspect of the Mocker's Song." *Condor*, 1922, vol. XXIV, pp. 153-157.

Saunders<sup>6</sup> in his study on the "Recognition of Individual Birds by Songs" would also give some support to the idea that not all of the remarkable vocal abilities of a Mockingbird are his by virtue of mimicking power alone.

On the basis of my own observations it seems probable that many of the tunes which a Mockingbird sings are inherited in much the same

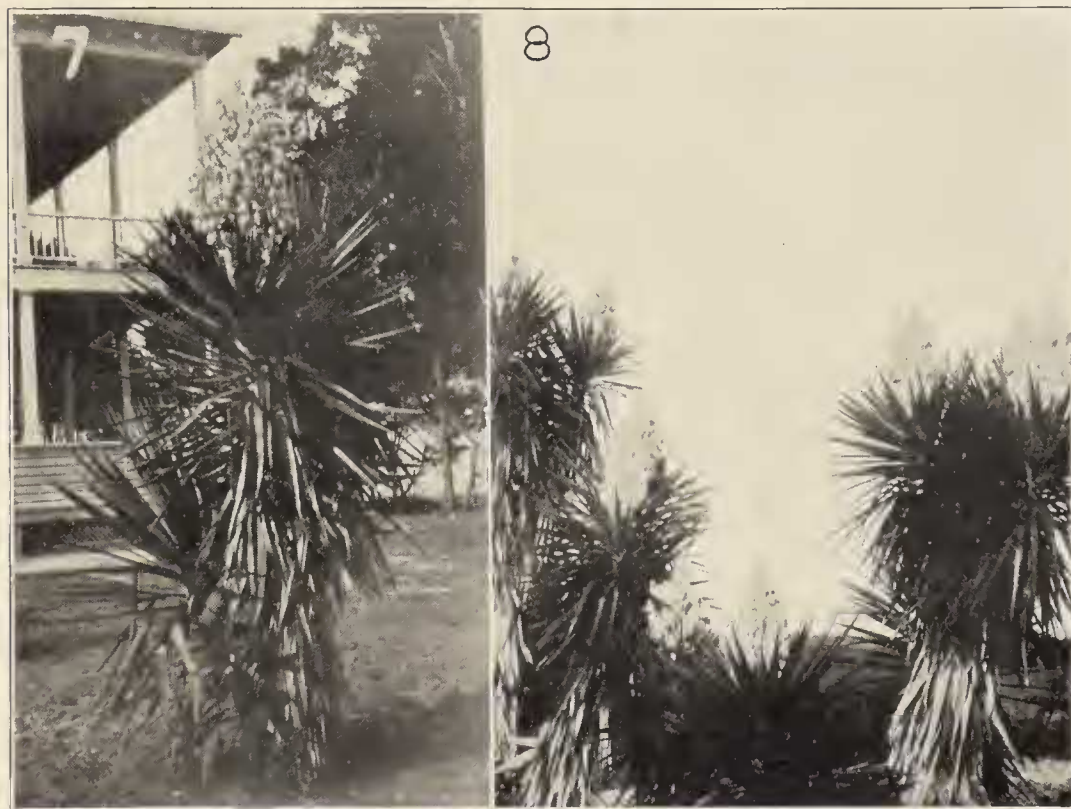


FIGURE 2. 7, A typical yucca in full bloom, in which Mockingbirds nested for three successive seasons. 8, A cluster of yuccas, showing the favorite nesting place of the Mockingbirds.

manner as instincts. We are aware on the basis of recent studies of inheritance, and of neurology as well, that there are many complex cortical patterns, which when stimulated produce a definite and complete series of reactions. It seems very probable that in the Mockingbird there are many such complex patterns which are definitely inherited and only need an appropriate stimulus to provide expression.

Since the songs sung by the Mockingbird under observation were not those most commonly heard, since they agree in the main with the songs which are the favorites of other Mockingbirds in widely scattered areas, and since there is such great variability in the vocal powers of different individuals, it seems probable that a Mockingbird does not as

<sup>6</sup>Saunders, Aretas A. "Recognizing Individual Birds by Song." *Auk*, vol. 41, 1924, pp. 242-259.

a rule consciously mimic songs, but only possesses an unusually large series of melodies which it calls forth in wonderful perfection and in most surprisingly clear and melodious tones. To me the thrill of listening to a fluent Mockingbird is much like listening to a symphony where the themes are those which we often associate with other less able or artistic birds.

The author in no wise wishes to belittle the wonderful artistry of this remarkable bird. He has enjoyed to the fullest the marvelous songs, has been thrilled to the depths by its music, and has often been surprised at the dexterity of this avian artist, but he only questions if these are "conscious" and even "purposive" endeavors, as has been claimed by many writers.

And so he would suggest that perhaps the Mockingbird is no more of a mimic than the Robin, the Cardinal, or the wren, each of which mimics more or less successfully the songs of its parents. The Mockingbird, however, is outstanding in its remarkable repertoire but is only slightly if at all more remarkable than the Hermit Thrush, or the Brown Thrasher, and others of its close relatives, with which we rarely if ever associate mimicry. Accordingly, it seems probable that all of these birds inherit various neural patterns, which appropriate stimuli activate, thus reproducing the songs characteristic of each species.

WESTERN RESERVE UNIVERSITY,  
CLEVELAND, OHIO.

---

## ON THE STATUS OF HARLAN'S HAWK

BY G. EIFRIG

Last June I spent ten days in Northwestern Wisconsin, near Hayward, at the home of Mr. K. W. Kahmann, the Chicago taxidermist.

Here I observed the Clay-colored Sparrow in life, as a breeding bird, for the first time in my life, and noticed the Sharp-tailed Grouse and Brewer's Blackbird to be common residents, showing that here there is a strong infusion of western avifauna. I was equally interested, however, in a collection of mounted raptors which Mr. Kahmann had in his shop. Among them was a large black hawk. It was not the roughleg, as one look at the tarsi showed; nor a Swainson's Hawk, because it had the four, instead of the three, outer primaries notched. It turned out to be a typical Harlan's Hawk (*Buteo borealis harlani*).

After reaching home with the specimen in my possession, I consulted all available literature on the status of this hawk, which has